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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/552,929

10/11/2005

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05128744

6851

34431 7590 08/01/2007
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EXAMINER

LE, DANG D

ART UNIT

PAPER NUMBER

2834

MAIL DATE

DELIVERY MODE

08/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,929

Applicant(s)

BAEMPFER ET AL.

Examiner

Dang D. Le

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/7/07 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 2, and 4 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

Art Unit: 2834

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richter et al. (6,218,761) in view of Niimi (5,744,889).

Regarding claim 1, Richter et al. shows a fuel pump comprising an electric motor which has a commutator having a plurality of laminates (32) and carbon brushes (36) which slide over the laminates, and which has coils (26) which are electrically connected to individual laminates and are arranged in slots in an armature, characterized in that: (a) the carbon brushes (36) and the laminates (32) have unknown structure and the brushes (36) being axially prestressed on a disk-like commutator and an impeller (22) is coupled to the shaft (27), and wherein at least the commutator and brushes of the electric motor are disposed within a housing of the fuel pump and within a path of fuel which is advanced through the housing by the impeller.

Richter et al. does not show the carbon brushes and the laminates having identical trapezoidal sections and the brushes being axially prestressed on a disk-like commutator and are positioned with the narrow end of the trapezoid adjacent to a shaft of the electric motor.

Niimi shows the carbon brushes (12E) and the laminates (18) have identical trapezoidal sections (Figure 1, with straight edges) and the brushes (12E) are axially prestressed on a disk-like commutator (18) and are positioned with the narrow end of

Art Unit: 2834

the trapezoid adjacent to a shaft (16) of the electric motor for the purpose of increasing large contact area in order to reduce heat.

Since Richter et al. and Niimi are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the carbon brushes and the laminates with identical trapezoidal sections and to arrange the brushes axially prestressed on a disk-like commutator and positioned with the narrow end of the trapezoid adjacent to a shaft of the electric motor as taught by Niimi for the purpose discussed above.

Regarding claim 2, Niimi also shows each of the carbon brushes (12E) being as wide as two laminates (18, narrow ends being as wide as the narrow end of the laminates) plus a single insulation layer between the laminates.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richter et al. in view of Niimi and further in view of Raad (6,578,681) and Savage et al. (3,042,822).

Regarding claim 4, the pump of Richter et al. modified by Niimi includes all of the limitations of the claimed invention except for the carbon brush for operating the electric motor at 42 volts has a resistivity of 300 to 400 micro-ohm.

Raad shows that the brush can be made to operate at 42 volts (column 9, line 51) for the purpose of utilizing the new power system.

Art Unit: 2834

Savage et al. shows that the brush can be made at low resistivity for the purpose of reducing heat.

Since Richter et al., Niimi, Raad, and Savage et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the carbon brush for operating the electric motor at 42 volts and with a resistivity of 300 to 400 micro-ohm as respectively taught by Raad and Savage et al. for the purposes discussed above.

Information on How to Contact USPTO

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D. Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/29/07

A handwritten signature in black ink, appearing to read "Dangle L. L.", is written in a cursive style.

DANGLE
PRIMARY EXAMINER